Claims

1.   A money item acceptor comprising: a signal source to produce a money
item parameter signal as a function of a sensed characteristic of a money item, a
store to provide data corresponding to a normal acceptance range of values of
the parameter signal for a money item of a particular denomination, the range
including relatively high and low acceptance probability regions wherein the
value of a parameter signal corresponds to a relatively high or low probability of
an occurrence of a sensed money item of said particular denomination, and a
processor configuration operable to determine when an occurrence of the
parameter signal corresponding to a first money item adopts a predetermined
value relationship, and in response thereto, to compare the value of a subsequent
occurrence of the parameter signal corresponding to a second money item with
data corresponding to a restricted acceptance range as compared with the normal
acceptance range, and to provide an output corresponding to acceptability of the
second money item if the second occurrence of the parameter signal falls within
said restricted acceptance range, said processor being operable to compare
subsequent occurrences of the parameter signal with the restricted acceptance
range, and if a first number of them correspond to acceptable money items, to
revert to the normal acceptance range, wherein,
the processor is operable after reverting to the normal acceptance range and in
response to a subsequent money item parameter signal adopting said
predetermined value relationship, to compare subsequent occurrences of the
parameter signal with the restricted acceptance range and if a second number of
them correspond to acceptable money items, to revert to the normal acceptance
range again, the second number being different from the first number.

2.   An acceptor according to claim 1 wherein the second number is greater
than the first number.

3.   An acceptor according to claim 1 or 2 wherein the processor is operable to increment said first number by a predetermined amount to define said second number.

4.   An acceptor according to any preceding claim including a counter operable to count said first number and thereafter to count said second number.

5.   An acceptor according to claim 4 wherein the processor is operable to reset the count counted by the counter to a default count value in the event that there is no occurrence of a money item parameter signal within a predetermined security time period.

6.   An acceptor according to any preceding claim wherein said predetermined value relationship occurs when an occurrence of the money item parameter signal has a value within the low acceptance probability range.

7.   An acceptor according to any preceding claim wherein said predetermined value relationship occurs when an occurrence of the money item parameter signal has a value within a predetermined security barrier range outside of the normal acceptance range.

8.   An acceptor according to any preceding claim wherein the processor is operable to compare occurrences of the money item parameter signal with said restricted acceptance range for a first predetermined time period following an occurrence of the money item parameter signal that has said predetermined value relationship, and then to revert to the normal acceptance range.

9.   An acceptor according to claim 8 wherein the processor is operable after reverting to the normal acceptance range to compare occurrences of the money item parameter signal with said restricted acceptance range for a second predetermined time period following an occurrence of the money item parameter signal adopting said predetermined value relationship, and then to revert to the

normal acceptance range, said second time period being greater than the first time period.

10.   An acceptor according to claim 9 wherein the processor is operable to define the second time period as a predetermined percentage increase of the first time period.

11.   An acceptor according to claim 9 or 10 including a timer operable to time said first time period and said second time period.

12.   An acceptor according to claim 9 or 10 wherein the processor is operable to reset the time period timed by the timer to a default value in the event that there is no occurrence of a money item parameter signal within a predetermined security time period.

13.   A money item acceptor comprising: a signal source to produce a money item parameter signal as a function of a sensed characteristic of a money item, a store to provide data corresponding to a normal acceptance range of values of the parameter signal for a money item of a particular denomination, the range including relatively high and low acceptance probability regions wherein the value of a parameter signal corresponds to a relatively high or low probability of an occurrence of a sensed money item of said particular denomination, and a processor configuration operable to determine when an occurrence of the parameter signal corresponding to a first money item adopts a first predetermined value relationship, and in response thereto, to compare the value of a subsequent occurrence of the parameter signal corresponding to a second money item with data corresponding to a restricted acceptance range as compared with the normal acceptance range, and to provide an output corresponding to acceptability of the second money item if the second occurrence of the parameter signal falls within said restricted acceptance range, said processor configuration being further operable to determine when an occurrence of the parameter signal corresponding to a first money item adopts a

second predetermined value relationship with a range of values within said high

acceptance probability region for a money item of a particular denomination, and

in response thereto, to compare the value of a subsequent occurrence of the

parameter signal corresponding to a second money item with data corresponding

5   to an internal security range within said restricted acceptance range, and to

provide an output corresponding to acceptability of the second money item if

the second occurrence of the parameter signal falls outside said internal security

range.

10   14.   An acceptor according to claim 13 wherein, said processor configuration

is further operable to determine when a first money item parameter signal adopts

said second predetermined value relationship, and in response thereto, to

compare subsequent occurrences of the parameter signal with said internal

security range, and if a first number of them correspond to acceptable money

15   items, to discontinue comparison with the internal security range of values, and,

after discontinuing comparison with the internal security range of values, and in

response to a subsequent money item parameter signal adopting said second

predetermined value relationship, to compare subsequent occurrences of the

parameter signal with said internal security range, and if a second number of

20   them correspond to acceptable money items, to discontinue comparison with the

internal security range of values again, the second number being different from

the first number.

15.   An acceptor according to claim 14 wherein the second number is greater

25   than the first number.

16.   An acceptor according to claim 14 or 15 wherein the processor is

operable to increment said first number by a predetermined amount to define

said second number.

30

17.   An acceptor according to claim 14, 15 or 16, including a counter operable

to count said first number and thereafter to count said second number.

18.   An acceptor according to claim 17 wherein the processor is operable to reset the count counted by the counter to a default count value in the event that there is no occurrence of a money item parameter signal within a predetermined
5   security time period.

19.   An acceptor according to any one of claims 13 to 18 wherein said second predetermined value relationship occurs when an occurrence of the money item parameter signal has a value within said range of values within said high
10   acceptance probability region for a money item of a particular denomination.

20.   An acceptor according to any one of claims 13 to 19 wherein the processor is operable to compare occurrences of the money item parameter signal with said internal security range for a first predetermined time period
15   following an occurrence of the money item parameter signal that has said second predetermined value relationship, and then to discontinue comparison with the internal security range of values.

21.   An acceptor according to claim 20 wherein the processor is operable,
20   after discontinuing comparison with the internal security range of values, to compare occurrences of the money item parameter signal with said internal security range for a second predetermined time period following an occurrence of the money item parameter signal adopting said second predetermined value relationship, and then to discontinuing comparison with the internal security
25   range of values range, said second time period being greater than the first time period.

22.   An acceptor according to claim 21 wherein the processor is operable to define the second time period as a predetermined percentage increase of the first
30   time period.

23.   An acceptor according to claim 21 or 22 including a timer operable to
time said first time period and said second time period.

24.   An acceptor according to claim 21 or 22 wherein the processor is
5   operable to reset the time period timed by the timer to a default value in the
event that there is no occurrence of a money item parameter signal within a
predetermined security time period.

25.   A method of accepting money items comprising: producing a money item
10   parameter signal as a function of a sensed characteristic of a money item,
providing data corresponding to a normal acceptance range of values of the
parameter signal for a money item of a particular denomination, the range
including relatively high and low acceptance probability regions wherein the
value of a parameter signal corresponds to a relatively high or low probability of
15   an occurrence of a sensed money item of said particular denomination,
determining when an occurrence of the parameter signal corresponding to a first
money item adopts a predetermined value relationship, and in response thereto,
comparing the value of a subsequent occurrence of the parameter signal
corresponding to a second money item with data corresponding to a restricted
20   acceptance range as compared with the normal acceptance range, providing an
output corresponding to acceptability of the second money item if the second
occurrence of the parameter signal falls within said restricted acceptance range,
comparing subsequent occurrences of the parameter signal with the restricted
acceptance range, and if a first number of them correspond to acceptable money
25   items, reverting to the normal acceptance range, after reverting to the normal
acceptance range and in response to a subsequent money item parameter signal
adopting said predetermined value relationship, comparing subsequent
occurrences of the parameter signal with the restricted acceptance range and if a
second number of them correspond to acceptable money items, reverting to the
30   normal acceptance range again, the second number being different from the first
number.

26.   A money item acceptor comprising: a signal source to produce a money item parameter signal as a function of a sensed characteristic of a money item under test, a store to provide data corresponding to an acceptance range of values of the parameter signal for a money item of a particular denomination, and a processor configuration operable to determine when an occurrence of the parameter signal falls within the acceptance range, for accepting the money item, wherein, said processor configuration is operable to provide a focussed rejection window within said acceptance range and with a disposition dependent on the value of a preceding occurrence of the parameter signal corresponding to a preceding money item, and to provide an output corresponding to the rejection of the money item under test if its corresponding parameter signal falls within the focussed rejection window.

27.   An acceptor according to claim 26 wherein the focussed rejection window spans the mean of at least two parameter signals corresponding to preceding money items.

28.   An acceptor according to claim 26 or 27 wherein the processor is operable to compare occurrences of the money item parameter signal with the focussed rejection window until a preselected number of successive ones of the occurrences have values falling outside of the window.

29.   An acceptor according to claim 26, 27 or 28 wherein the acceptance range data provided by the store comprises data corresponding to a normal acceptance range of values of the parameter signal for a money item of a particular denomination, the range including relatively high and low acceptance probability regions wherein the value of a parameter signal corresponds to a relatively high or low probability of an occurrence of a sensed money item of said particular denomination, and the processor configuration is operable to determine when an occurrence of the parameter signal corresponding to a first money item adopts a predetermined value relationship, and in response thereto, to compare the value of a subsequent occurrence of the parameter signal corresponding to a second

money item with data corresponding to a restricted acceptance range as compared with the normal acceptance range, and to provide an output corresponding to acceptability of the second money item if the second occurrence of the parameter signal falls within said restricted acceptance range,

5   said processor being operable to compare subsequent occurrences of the parameter signal with the restricted acceptance range, and if a first number of them correspond to acceptable money items, to revert to the normal acceptance range.

10   30.   An acceptor according to claim 29 wherein the processor is operable after reverting to the normal acceptance range and in response to a subsequent money item parameter signal adopting said predetermined value relationship, to compare subsequent occurrences of the parameter signal with the restricted acceptance range and if a second number of them correspond to acceptable

15   money items, to revert to the normal acceptance range again, the second number being different from the first number.

31.   An acceptor according to any preceding claim wherein the signal source is operable to produce a plurality of individual money item parameter signals

20   each as a function of a respective different characteristic of a sensed money item, and the store is configured to provide data for normal acceptance ranges of values, and any focused rejection or other range of values of parameter signals, individually for each of these respective different characteristics.

25   32.   An acceptor according to any preceding claim wherein the signal source includes a sensor to sense a characteristic of the money item.

33.   An acceptor according to claim 31 wherein the sensor is operable to sense a characteristic of a money item that comprises a coin.

30

34.   An acceptor according to claim 32 wherein the sensor comprises an inductor to sense an inductive characteristic of the coin.

35.   An acceptor according to claim 31 wherein the sensor is operable to sense a characteristic of a money item that comprises a banknote.

5   36.   A method of accepting money items comprising: producing a money item parameter signal as a function of a sensed characteristic of a money item under test, providing data corresponding to an acceptance range of values of the parameter signal for a money item of a particular denomination, determining when an occurrence of the parameter signal falls within the acceptance range, for

10   accepting the money item, providing a focussed rejection window within said acceptance range and with a disposition dependent on the value of a preceding occurrence of the parameter signal corresponding to a preceding money item, and providing an output corresponding to the rejection of the money item under test if its corresponding parameter signal falls within the focussed rejection

15   window.